

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
DAVID L. FEIGENBAUM
FISH & RICHARDSON P.C.
225 FRANKLIN STREET
BOSTON, MA 02110-2804

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing
(day/month/year) **02 NOV 2006**

Applicant's or agent's file reference
17146-002WO1

FOR FURTHER ACTION See paragraphs 1 and 4 below

International application No.
PCT/US05/11749

International filing date
(day/month/year) 07 April 2005 (07.04.2005)

Applicant
FORTELLIGENT, INC.

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 338.82.70.

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/ US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-3201

Authorized officer


Hafiz Tariq

Telephone No. 571-272-3600

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 17146-002WO1	FOR FURTHER ACTION		see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US05/11749	International filing date (day/month/year) 07 April 2005 (07.04.2005)	(Earliest) Priority Date (day/month/year) 16 April 2004 (16.04.2004)	
Applicant FORTELLIGENT, INC.			

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the Report

a. With regard to the **language**, the international search was carried out on the basis of:



the international application in the language in which it was filed.



a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box No. II)

3. ☐ **Unity of invention is lacking** (See Box No. III)

4. With regard to the **title**,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____



as suggested by the applicant.



as selected by this Authority, because the applicant failed to suggest a figure.



as selected by this Authority, because this figure better characterizes the invention.



none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/11749

A. CLASSIFICATION OF SUBJECT MATTER

IPC: G06F 19/00(2006.01),G06F 9/45,G06F 7/60,G06F 9/44,G06F 17/30,G06Q 40/00,G06F 9/44

USPC: 700/97,703/22,703/22,705/7,705/10,705/38,717/104

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 700/97, 703/22, 703/222, 705/7, 705/10, 705/38, 717/104

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
ProQuest

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 02/19061 A2 (MarketSwitch Corp.) 7 March 2002 (07.03.2002), Abstract	1-172
X	WO 03/005232 A2 (Angoss Software Corp.) 16 January 2003 (16.01.2003), Abstract, Paragraphs 1-2, Page 3; Last Paragraph, Page 5; Paragraph 2, Page 7; Paragraphs 1-3, Page 11; a-f, Page 16; Figures 1-2, 5c, 8	1-172
X	US 6,430,539 B1 (Lazarus et al.) 06 August 2002 (06.08.2002), Abstract; Column 3, Lines 27-54; Column 12, Lines 10-49; Column 27, Lines 24-53; Column 28, Lines 24-52; Column 37, Lines 40-65; Figures 1a-1c, 4a-4b, 5	1-172
E	US 6,879,971 B1 (Keeler et al.) 12 April 2005 (12.04.2005) Abstract; Column 1, Lines 50-54; Column 2, Lines 51-68; Figures 1a, 6, 7a-7f, 22-32	1-172

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

31 July 2006 (31.07.2006)

Date of mailing of the international search report

02 NOV 2006

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-3201

Authorized officer

Hafiz Tariq

Telephone No. 571-272-3600

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/11749

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
T	US 6,954,758 B1 (O'Flaherty) 11 October 2005 (11.10.2005), Abstract; Column 4, Lines 10-68; Column 5, Lines 30-68; Column 6, Lines 1-55; Column 7, Lines 1-55; Column 9, Lines 8-68; Figures 2-4	1-172
T	US 7,043,461 B2 09 (Kehder et al.) May 2006 (09.05.2006), Abstract; Column 2, Lines 31-62; Column 3, Lines 1-5, 35-68; Column 9, Lines 57-68; Column 10, Lines 1-43	1-172
T	US 7,047,251 B2 (Reed et al.) 16 May 2006 (16.05.2006) Abstract; Column 3, Lines 20-45; Column 6, Lines 19-68; Column 9, Lines 26-60; Figures 1A, 2, -4,9	1-172
X	Harrison, H.C., An Intelligent Business Forecasting System, ACM May 1993, Pages 229-236	1-172
X	Haughton et al., A review of software packages for data mining, The American Statistician, November 2003, Vol. 57, No. 5, Pages 290-309	1-72
X	Angus, Jeff, Enterprise Miner 5.1 Digs into Data, InforWorld, August 9, 2004, Vol. 26, No. 32, Pages 22-23	1-172
X	Chapman et al., CRISP-DM 1.0 Step-by-Step data mining guide, August 2000, Pages 27-31, 53-59, 71-79	
X	Little, Roderick J.A. et al., Statistical Analysis with Missing Data, Wiley-Interscience, 2002, ISBN 0-471-18386-5, Pages 19-21, 166-188, 292-309	1-172
X	Cabena, Peter et al., Intelligent Miner for Data Applications Guide, IBM Redbook, SG24-5252-00, March 1999, Pages 9-17, 27-35, 69-77, 87-108, 111-128	1-172

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
DAVID L. FEIGENBAUM
FISH & RICHARDSON P.C.
225 FRANKLIN STREET
BOSTON, MA 02110-2804

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference 17146-002WO1		Date of mailing (day/month/year) 08 Nov 2005
FOR FURTHER ACTION See paragraph 2 below		
International application No. PCT/US05/11749	International filing date (day/month/year) 07 April 2005 (07.04.2005)	Priority date (day/month/year) 16 April 2004 (16.04.2004)
International Patent Classification (IPC) or both national classification and IPC IPC: Please See Continuation Sheet USPC: 700/97,703/22,703/22,705/7,705/10,705/38,717/104		
Applicant FORTELLIGENT, INC.		

I. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Date of completion of this opinion 01 August 2006 (01.08.2006)	Authorized officer Hafiz Tariq Telephone No. 571-272-3600
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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US05/11749

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
- ☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
- ☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
- ☐ filed together with the international application in electronic form.
- ☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US05/11749

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>50</u>	YES
	Claims <u>1-49 and 51-172</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-172</u>	NO
Industrial applicability (IA)	Claims <u>1-172</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Please See Continuation Sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US05/11749

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of IPC:

G06F 19/00(2006.01), G06F 9/45, G06F 7/60, G06F 9/44, G06F 17/30, G06Q 40/00, G06F 9/44

V. 2. Citations and Explanations:

Claims 1-49 and 51-172 lack novelty under PCT Article 33(2) as being anticipated by Cabena et al., *Intelligent Miner for Data Applications Guide* (March 1999).

Regarding Claims 1, 7, 11, 17-18, 20, 25, 28, 35, 41-45, 49, 51-56, 61, 67-70, 72-80, 85, 91, 126, 141 and 165-172 *Intelligent Miner* teaches a machine-based system and method comprising (Chapter 1.4-1.5, Pages 8-13; Chapter 1.6, 15-17; Chapter 3, Pages 27-33; Chapter 4, Pages 33-66; Chapter 5, Pages 70-77; Chapter 6, Pages 89-108; Chapter 7, Pages 111-131; Figures 3, 7-11, 16, 27, 29, 30, 46, 49, 53, 56, 58, 60, 64):

- generating predictive models based on historical data received from one or more sources (Chapter 1.5, Pages 9-13);
- storing project information (model, variables, data, common location/format, etc.) for successive steps in model generation wherein the information includes at least two of the following: project objectives, requirements, information about historical data, model equations, model performance characteristics and model outputs (metadata; Chapter 1.6, Pages 13-17);
- a common project tracking paradigm (workflow, task guides, approach, structured sequence, staging, methodology, etc.) via a graphical user interface (icons, indicia, images, menus, etc.) includes sample dataset generation, variable transformation, dimension reduction, model generation/validation (testing) and list scoring (Chapter 1.6, Pages 13-17; Chapter 4.3, Pages 34-38; Chapter 5.3, Pages 70-73; Chapter 6.3, Pages 90-95; Chapter 7.3, Pages 113-120);
- includes a series of user choice points (design choices), actions or parameters that govern the generation of the model (Chapter 5.3, Pages 70-74; Chapter 6.3, Pages 89-95; Chapter 8.3, Pages 115-120);
- generating a model (output) the includes a selection, rank by propensity based on the scoring of the customer data (Pages 11, 87; Chapter 6.3.1, Pages 90-91);
- transforming variables into predictive variables (normalization, Bayesian normalization, source variables, predictive power, strength measurement, data transformations, etc.; Pages 16, 22; Chapter 4.3.2, Pages 38-29; Chapter 6.3.2, Pages 93-94);
- accounting for (inputs, enters, adjusts for, etc.) missing and/or unstable values/data (e.g. pruning, estimation, Bayesian normalization, data preparation, etc.; Pages 16, 24, 97, 100);
- adjusting variables to represent effects exhibited by the data (main effects/interactions; processing functions (Page 16) ;
- derived variables include constructed variables and transformed variables (Chapter 4.3.2, Pages 38-29; Chapter 6.3.2, Pages 93-94);
- enables users to combine (group, cluster, etc.) variables;
- validate a model process between two sets/subsets of historical data (model validation, testing, etc.; Chapter 6.3.5, Pages 95-101);
- identifying distinguishing characteristics of customers in the system (Chapter 3, Pages 27-33; Chapter 4, Pages 33-66);

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US05/11749

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

- generating measures strength (predictive power, correlation, level of significance, concordance, etc.) of variables (nominal, ordinal, interval, etc.; Chapter 1.5.1, Pages 9-11); and
- generating optimal model by terminating when the fitting process reaches an optimal point (Chapter 6.3.6, Pages 102-103).

Regarding Claims 2, 12, 29, 36, 62 and 131 Intelligent Miner teaches a predictive modeling system and method wherein the customer data further comprises behavior of prospective and/or current customers with respect to products or services (Chapter 6.3, Pages 90-93; Figure 57).

Regarding Claims 3, 13, 21, 30, 37 and 63 Intelligent Miner teaches a predictive modeling system and method wherein the customer data further comprises purchase and or payment for a service/product of a vendor (Chapter 6.3, Pages 93-95; Chapter 7.3, Pages 113-117; Figure 57).

Regarding Claims 4, 14, 22, 38, 57, 64 and 132 Intelligent Miner teaches a predictive modeling system and method wherein the customer data further comprises retention (attrition) information (Chapter 7.3, Pages 113-117).

Regarding Claims 5, 15, 23, 32, 58 and 65 Intelligent Miner teaches a predictive modeling system and method wherein the customer data further comprises risk of asserting claims, loan payment or prepayment to a vendor (Pages 8-9, 37; Chapter 5.4, pages 76-85; Chapter 7.4, Pages 120-122; Figures 33-35).

Regarding Claims 6, 16, 24, 40, 59 and 66 Intelligent Miner teaches a predictive modeling system and method wherein the customer data further comprises product/service usage information (Chapter 7.4, Pages 120-122; Figures 33-35).

Regarding Claims 8-10, 19, 26-27, 34, 47, 48 and 60 Intelligent Miner teaches a predictive modeling system and method further comprising (Chapter 1.6, Pages 14-17; Chapter 2, pages 19-24; Figures 7-9):

- enabling users to replicate projects (save as, copy, etc.);
- enabling users to refine previous project (review, edit, revise, adjust, etc.); and
- enabling users to apply the model based on the stored project information.

Regarding Claim 71 Intelligent Miner teaches a predictive modeling system and method further comprising displaying a response function of a (target) variable against untransformed, transformed and related transforms of the (source) variables (Figures 62-65).

Regarding Claims 81-84, 86-89, 92-94 and 129-130 Intelligent Miner teaches a predictive modeling system and method further comprising (Chapter 5.4, Pages 76-84; Figures 30, 58):

- enabling users to group/combine variables via the user interface (window, pointer, mouse, etc.; e.g. move between groups/subgroups)
- view variable information (metadata, variable properties, status, class, category, etc.); and
- view variables (data dictionary, library, templates, etc.).

Regarding Claims 90 Intelligent Miner teaches a predictive modeling system and method further comprising displaying probability of event as a function of the variable (Figures 63-65).

Regarding Claim 94 Intelligent Miner teaches a predictive modeling system and method further comprising displaying a decision tree (Chapter 4.4.4, Page 66; Chapter 6.4.1, Page 103; Chapter 7.4.1, Page 120; Figure 50).

Regarding Claim 95 Intelligent Miner teaches a predictive modeling system and method further comprising displaying response distribution function (Figures 64-67).

Regarding Claims 96-125, 136-163 Intelligent Miner teaches a predictive modeling system and method comprising (Chapter 1.5, Pages 9-13; Chapter 1.6, 15-17; Chapter 3, Pages 27-33; Chapter 4, Pages 33-66; Chapter 5, Pages 70-77; Chapter 6, Pages 89-108; Chapter 7, Pages 111-131):

- generating a predictive model based on historical data (Chapter 1.5.1, Pages 9-11);
- selecting variables having at least a predetermined level of significance from a pool (group, library, list, etc.) of predictor variables;
- including non-linear and linear variables in the pool of variables (Pages 38, 93);
- generating a possible model using the selected variables and subset of the data (e.g. training; Chapter 6.3.5-6.3.6, Pages 95-102);
- determining whether the model generalizes the sample data (i.e. curve fitting, training, processing functions, Page 16; Chapter 6.3.5-6.3.6, Pages 95-102);
- if so then apply the model to the remaining data (Chapter 6.3.6-6.3.7, Pages 100-103; and
- displaying selected variables (Figures 13, 14);
- automatically selecting a class (library, list, category, type, etc.) of models suitable for the selected variables and dataset'
- displaying model performance information (statistical report card, lift chart, response chart, statistical reports, degree of monotonicity, minimum false positives/negatives, results analysis, etc.; Pages 29-30, 96, 100-101);
- changing/adjusting performance criteria, transformation or interaction variables to improve the fit of the model (Pages 96, 100-101);
- cross-validating the model (post model tests, random samples, etc.; Chapter 6.3.6-6.3.7, Pages 100-103);

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US05/11749

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

- comparing performance measures of validation and training set (Chapter 6.3.5-6.3.7, Pages 95-103; Figures 13-14, 53);
- generating a final model (Chapter 4.5, Pages 67-68 Chapter 6.3.7, Page 103); and
- applying the model to at least one non-historical dataset.

Regarding Claims 133-135 Intelligent Miner teaches a predictive modeling system and method further comprising determining a net present value in relation to retention, and promotion/product combinations in order to select a positive net present value outcome (Chapter 4.4.3, Pages 64-67; Chapter 7, Pages 111-131; Figure 54-55).

Claim 50 lacks an inventive step under PCT Article 33(3) as being obvious over Cabena et al., Intelligent Miner for Data Applications Guide (March 1999).

Regarding Claim 50 Intelligent Miner does not expressly teach encrypting the output as claimed.

It is a common and well known business practice to use well known cryptographic techniques to encrypt (secure) sensitive information/data for the purposes of ensuring that the sensitive (e.g. proprietary) data is only viewed/accessed by authorized users.

It would have been obvious to one skill in the art at the time of the invention that the predictive modeling system and method as taught by Intelligent Miner would have benefited from encrypting/securing its output thereby by ensuring that sensitive and/or proprietary data is only viewed/accessed by authorized users.

Claims 1-172 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under Article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*, a publication of WIPO.

In these Notes, "Article," "Rule" and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

* The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*, Volume I/A, Annexes B1 and B2).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, Volume I/A, paragraph 296).

What parts of the international application may be amended ?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Preliminary Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When ? Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments ?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How ? Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments ?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under Article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

If a demand for international preliminary examination is made, the written opinion of the International Searching Authority will, except in certain cases where the International Preliminary Examining Authority did not act as International Searching Authority and where it has notified the International Bureau under Rule 66.1bis(b), be considered to be a written opinion of the International Preliminary Examining Authority. If a demand is made, the applicant may submit to the International Preliminary Examining Authority a reply to the written opinion together, where appropriate, with amendments before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later (Rule 43bis.1(c)).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see the *PCT Applicant's Guide*, Volume II.